Magic xpi 4.13.3 Release Notes

OUTPERFORM THE FUTURE™

In this release of maintenance version of Magic xpi 4.13.3 Linux, we are delighted to offer you a new Data Connector in Data Mapper to work with the JDBC interface and some enhancements on top of the existing features.

New Features

JDBC Data Connector in Data Mapper

A new JDBC Data Connector (schema) is introduced to access databases using the JDBC interface. This Data Connector is available as the Source and Destination in the Data Mapper and can be used in conjunction with existing Database schema.
This schema requires a JDBC resource and within the resource you can configure the connector to be running under Local Agent.
Using this connector, you can connect to various databases using their respective drivers.
Please refer to the Magic xpi Help to identify the list of JDBC drivers tested and verified.

File Watcher Step

The File Watcher step lets you Read, Move, Rename and Delete files on the file system. It provides support to Local Agent. It supports two types of file systems, Disk (LAN) and FTP (also includes FTPS). The Disk option includes physical as well as network storage. For the FTP option, the SFTP protocol is supported.

Enhancements

OAuth2 Support in Dynamics CRM

The Dynamics CRM component now supports OAuth2 type of authentication. The Tenant ID, Client ID, and Client Secret values required for OAuth2 authentication can be configured on the Dynamics CRM resource.

Sync Mode in File Watcher Trigger

The File Watcher Trigger has introduced a new Sync Mode to guarantee the ordered delivery of scanned files.

Behavior Changes

- The elevated or admin rights are no longer required for the Magic xpi Studio and the Studio can now be run by the non-admin local user. The admin rights will still be required for Installation of the product as well as stopping and starting of all services.
- All the column names in the Data Mapper wizard will be encapsulated in square brackets.
- The default encoding for SAP ERP trigger is changed from UTF-16 to UTF-8.

Migration/Upgrade Considerations

- The Dynamics CRM resource created prior to Magic xpi 4.13.3 release will be migrated to use Basic type of authentication.
- If you are migrating from Magic 4.13, please read the *Migration/Upgrade Considerations* section in Magic xpi 4.13.1.

Known Issue

- When inserting large data, the Insert, Update and UPSERT operations may fail with an error for the MSSQL, MySQL, Oracle and DB2/400 databases.
  We are currently reviewing this issue and will provide you a fix for this in the upcoming patch.
- The **javaw.exe** process keeps running and does not get terminated even when the **GigaSpaces** service is shutdown.
- For the File Watcher and FTP component step, if the output parameter is assigned a variable name with Unicode characters, then no output is returned at runtime while executing the step.

Here is a list of your important issues that have been addressed in this release.

Fixed Issues

Issue ID	Description
MXPI-747	Proxy settings in Magic.ini file were not respected in the FTP component.
MXPI-14495	The messages processed by the MQTT trigger were in mixed order. You can now receive those in the synchronous mode by setting the **MQTTSyncProcessMode** flag in the Magic.ini file under the **[MAGIC_IBOLT]** section with the value set as **Y**.
MXPI-16992	The password length for the Email resource was restricted to 30 characters which is now increased to 100 characters.
MXPI-18795	The Magic xpi engine went into an infinite loop when the Data Mapper was reading multiple sub-occurrences using XML Position Forwarding.
MXPI-19360	When the schema name of PostgreSQL database contained capital letters, the columns were not shown in the Data Mapper wizard.
MXPI-20506	When uploading a file using the REST API with the Japanese name, the file name got corrupted and displayed a garbled name.
MXPI-21078	Salesforce OAuth2 authentication did not work when access to the Internet Explorer on the server was blocked.
MXPI-21747	Connector Builder failed to create a connector when it was given a name with Kanji characters and threw an, "Incorrect connector name" error.
MXPI-22150	The commented lines from the ifs.ini file got removed after rebuilding the project.
MXPI-22316	In certain scenario, after running for certain interval the project was aborted with error "General Network Error".
MXPI-22426	The List to XML method for the Microsoft Excel component wrongly created the file with "Windows-1255" encoding in place of UTF-8.
MXPI-22604	The Log File method for the File Management component did not return any error even when editing the locked file.
MXPI-23007	The FTP DAM methods File Exists, Get Operating System and Directory Listing were not supported in a single step when the FTP resource was configured with Local Agent value as True.
MXPI-23037	The Dynamics CRM component threw an error "Arithmetic operation resulted in an overflow" when fetching the data from the server.
MXPI-23135	Data Mapper truncated the leading blank spaces from the SQL query.

Issue ID	Description
MXPI-23184	When the SAP ERP step was configured with the Interface Type as Read with Table as an operation, the data type for the Max Rows and Skip Rows parameters changed from Numeric to Alpha on reopening the configuration window.
MXPI-23199	The **GetValue** action of the Excel component had a limit of 1000 characters only. It is now increased to 4000 characters.
MXPI-23279	In certain scenarios, the FTP step failed with "Error 9999: Jjava.lang.NoSuchMethodError: getDescription".
MXPI-23325	When the Email resource was configured in the Project Properties, the server start and shutdown email included the garbage characters.
MXPI-23461	For the Sugar component, the create operation failed to insert more than 1 record.
MXPI-23526	For the SAP B1 component, when executing a pre-defined code, with a single line of more than 256 characters, in the SBO_SP_PostTransactionNotice stored procedure, the xpi trigger deployment added an additional space due to which the deployment failed.
MXPI-23554	When the FTP component was configured with the SFTP protocol, the FTP step kept the connection alive and did not disconnect after step execution which resulted in a server crash due to a large number of open connections.
MXPI-23769	The flow variable of Alpha type was assigned some garbled characters even though the default value was set to Null.
MXPI-23794	In certain scenarios, if the Dynamic CRM resource was configured with OAuth2 authentication, the step configuration failed when the Account Entity was selected.

Note: All the maintenance versions are cumulative in nature and include all the fixes from all the previous maintenance versions.

Past Release Notes

In this release of maintenance version of Magic xpi 4.13.2, we are delighted to offer you enhancements on top of the existing features.

Magic xpi 4.13.2: New Features

Microsoft Dynamics 365 for Finance and Operations Connector

Magic xpi has introduced a new Dynamics 365 Finance and Operations connector which enables integration with Microsoft Dynamics 365 APIs.
This connector offers the following features:

- A query wizard to build complex queries while still allowing the user to manually enter and modify queries
- Cross-company support to fetch the data from the user's default company or all the companies accessible to the user
- Support for Dynamics 365 CE module
- Local Agent Compatibility

File Watcher

The File Watcher is a new trigger to monitor the files created on the file system. It provides support for Local Agent.
The trigger supports two types of file systems, Disk and FTP. The Disk option includes physical as well as network storage. For the FTP option, the SFTP protocol is supported.
This trigger can perform Move, Delete and Rename operations on the files.

Enhancements

API Support

The Salesforce and ServiceMax connectors are now upgraded to support the API version 51.0.

FTP Local Agent Compatible

The FTP connector is built using the new SDK and provides Local Agent support.

Read Interface in SAP ERP

The SAP ERP component has a new interface type **Read** which introduces two new operations namely **Query** and **Table**. The Query read operation is performed using the RSAQ_REMOTE_QUERY_CALL function and the Table read operation is performed using the RFC_READ_TABLE function. Users can also define filter criteria for selected columns and provide additional custom filters.

Behavior Change

- The TIMESTAMP field in the Data Mapper is now shown as Alpha type instead of DATE type. For the projects migrated from Magic xpi 4.7.x to 4.13 and above, to extract the DATE portion of the TIMESTAMP, use the DVal function in the Data Mapper. This change has to be done manually.

Migration/Upgrade Considerations

- The project build may not work at Command Line for a project with an FTP component after upgrading or migrating it to the Magic xpi 4.13.2 version. To resolve this, open the project in the Studio once for any migration activity that may be needed.

Known Issue

- SAP B1 resource may fail to validate for SAP B1 V10 with MSSQL database. To fix the issue, install SAP B1 and MSSQL database before installing Magic xpi.

- The Dynamics CRM Resource helper will not be able to retrieve the Organizations List for the On-Demand Deployment Type due to discontinuation of the Discovery service from Microsoft. As a solution enter the name of the Organization manually or select the Environment Variable that contains the same.

- It is mandatory to have the Magic Monitor password as Alpha-numeric combination. Numbers only password will fail. For example, password 1234 is invalid and A1234 is valid.

- The FTP DAM methods File Exists, Get Operating System and Directory Listing are not supported in a single step when the FTP resource is configured with Local Agent value as True.

- In some scenarios, it has been noticed that the Dynamics CRM component gives an error "Arithmetic operation resulted in an overflow" when fetching the data from the server.

Fixed Issues

Issue ID	Description
MXPI-13968	In the Magic Monitor, when the Date & Time column in the Activity Log was used for sorting the logs, the order got mixed up.
MXPI-16305	The Magic Monitor did not show any errors and the error code and error description were not updated for the DCRM component.
MXPI-16399	The Salesforce component gave an error, "Premature end of file" when performing the UPSERT operation in the Data Mapper. This can now be fixed by adding a logical name **IncludeEmptyRootElement** with value as **Y** in the logical names.
MXPI-16572	On migrating a project from Magic xpi 4.9 to 4.13, the SAP ERP steps failed to work if they used a dynamic resource.
MXPI-16858	The REST Client Get operation failed, when the URL was constructed using IP address instead of HostName. To skip the host name verification, add an underscore (_) character as a suffix to the HTTP protocol. For example, HTTPS_:\\
MXPI-16881	The detailed annotations of all the nodes were missing from the GSA XML configuration files in the gsa directory of GigaSpaces making configuration a difficult task.
MXPI-18223	The Web Services Client component failed to invoke a particular service with a "Web Service Client invocation failed java.lang.NullPointerException" error.
MXPI-18722	The Insert operation for column name ending with dot (.) character in the Data Mapper failed. This can be fixed by wrapping the column name in square brackets ([]).
MXPI-18770	A particular project got restarted when deployed in cluster of four servers.
MXPI-19002	The Web Services Client component showed a higher latency for particular projects invoking a JDE Web service.
MXPI-19030	For a particular project configured with the Websphere MQ trigger, the workers in the Magic xpi runtime went into an unresponsive state resulting in the Magic xpi server crash.
MXPI-19110	The Web Services Client component failed to invoke a particular service with an error "Web Service Client invocation failed java.beans.IntrospectionException: Method not found: setCCustos".
MXPI-19175	The WCF Client component failed to invoke a Web service for a particular WSDL file.

Issue ID	Description
MXPI-19264	The Host ID of the machine running the Magic xpi server changed continuously that caused runtime environment issues.
MXPI-19331, MXPI-19469	The HTTP Trigger didn't have the option to use any other characters than the hash (#) character in the endpoint URL. This can now be done by providing an alternate character in the new **HTTPTrigSeparator** flag. It is recommended to select the character with caution. Any failure due to an inappropriate character would be the user's responsibility.
MXPI-19452	The projects with multiple SAP ERP triggers using the same SAP ERP service failed to start when the trigger names were different than the default ones.
MXPI-19485	The WCF Client component failed to consume a particular service due to the timeout error.
MXPI-19677	The Append XML data to file destination type in the Data Mapper failed to work when the file path was constructed using a context variable.
MXPI-19715	In certain scenarios, the button to show the blob attachment on the Magic Monitor failed to open the attachment and threw an "HTTP Status 404" error.
MXPI-19782	The Web Services Client component failed to load WSDL files which were secured using the user name and password authentication. Now with the fix provided user name and password will have to be provided while loading the WSDL file.
MXPI-19861	The length of the Username field on the REST Client resource was restricted to 30 characters. The allowed length is now increased to 100 characters.
MXPI-19901	The Parameter Value for the Build Dynamic Parameters field of the XSLT component was restricted to 500 characters. The limit is now increased to 5000 characters.
MXPI-19904, MXPI-21592	For MS-SQL database, Data Mapper gave an invalid SQLTYPE error when mapped with XML Data Type column.
MXPI-19944	The functions **InStr** and **StrTokenCnt** worked incorrectly when used with the XML blob received from the SAP ERP component.
MXPI-20019	The value in the ProjectsDirPath attribute was incorrect in the projectsStartup.xml file for the Japanese version.
MXPI-20022	For a particular project, after migrating the project from version 4.1 to version 4.13 the solutions were not loaded correctly in the Studio when the inactive business flows were deleted from business processes and the project was reopened. The source code was also corrupted on reopening the project.

Issue ID	Description
MXPI-20028	When the Magic xpi installer was run using Windows Authentication, the internal databases table scripts were not executed.
MXPI-20670	Magic xpi server had memory leak in a certain scenario when the project was running for a long time and configured using databases and REST Client.
MXPI-20102	The Magic SOAP server always generated a service using the SOAP version 1.2 even though the SOAP version 1.1 was selected when configuring the Web Services service.
MXPI-20104	The Magic SOAP server was unable to pick the XSD schema file when the file was located in the network and not on the local machine.
MXPI-20145	The WCF Client component threw an error "Exception has been thrown by the target of an invocation" when sending a request for a particular WSDL file.
MXPI-20241	The Web Services Client failed to connect to the SOAP service when using a pre-emptive authentication mechanism.
MXPI-20277	For the SAP ERP component, SAP RFC call failed when it was configured without any parameter.
MXPI-20310	Data Mapper failed to validate the XML against the XSD file in a certain scenario.
MXPI-20346	Project with multiple SAP ERP triggers failed to work when each trigger was configured with a separate SAP ERP service with different PROG ID values.
MXPI-20394	In the Data Mapper, the empty numeric fields were created with value mapped to 0 even though "Always Create Nodes" property was set to No.
MXPI-20432	The Web Services Client component failed to invoke a certain Web service with a connection timed out exception.
MXPI-20528	In certain scenarios, the Magic xpi studio crashed when selecting tags on the OPC component step.
MXPI-20605	The information on the EDI connector resource working with a specific service was missing from the documentation.
MXPI-20801	Magic xpi runtime failed to deliver the critical state email alerts when the email was configured using the Microsoft 365 credentials.
MXPI-21053	The Magic xpi Studio crashed during the resource validation when the Data Mapper was configured with a manual SQL select query.
MXPI-21264	For SAP ERP trigger, after sending an IDOC from the SAP server, the trigger information, and the trigger IDoc variable value was empty in some cases.

Issue ID	Description
MXPI-21377	Project with multiple SAP ERP triggers failed to work when each trigger was configured with separate SAP ERP service with different PROG ID values.
MXPI-21495	The EDI Partner configuration folder under the Magic xpi project was created using the GUID instead of the partner name value.
MXPI-21504	The Time Data Type mapping from database to Magic xpi failed to work.
MXPI-21657	HTTP Trigger failed to accept more than one blob argument.
MXPI-21888	Dynamics CRM returned an empty result for the Query operation when All Return Attributes were selected.

Note: All the maintenance versions are cumulative in nature and include all the fixes from all the previous maintenance versions.

In this release of maintenance version of Magic xpi 4.13.1, we are delighted to present you 3 new connectors, database password encryption support, 4 new functions and so on. Along with that the product offers enhancements on top of the existing features.

Magic xpi 4.13.1: New Features

We offer you following 3 new connectors:

Knowi

The Knowi connector is based on an idea of providing a way to post and query the data into Knowi.
It allows the user to invoke Knowi REST APIs from the Magic xpi flow to pull the data from the existing datastores or push the data to Knowi server.

Matics

The Matics connector provides connectivity to the Matics server with read and write capabilities.
It pulls the Interfaces list from the Matics server on resource validation.
It also allows the user to invoke Matics REST APIs from the step.

EDI

The EDI connector is designed with an idea of letting the user configure access to the EDI server and do the document transaction for different business partners.
It allows the user to access the EDI server to receive EDI Document Types from different Partners. It also enables the user to post an EDI Message for a particular EDI Document Type, Get the list of the Messages on the EDI server, and the message status.

Enhancements

Internal Database Password Encryption

Magic xpi now supports encryption of password for the internal database configured during the installation.

When installing Magic xpi 4.13.1, on top of an older version, the installer process automatically encrypts the password for the internal database.

The password configured under the Magic Monitor configuration file also gets encrypted once the GSA and Monitor Display Server services are restarted.

You can also choose to change the password later. For more information, refer to *How to Change the Database Password* page in the Magic xpi Help file.

Functions to Search Regular Expressions

In this maintenance version, 4 new functions have been added to the list of supported functions. This will enhance the regular expression support in Magic xpi.

The new functions are:

- RegExMatch
- RegExGetGrp
- RegExSearch
- RegExReplace

OAuth 2 Support in Email & Exchange Components

The Email and Exchange components now support OAuth 2 as an authentication type. The OAuth 2 details can be configured on the Email and Exchange resources respectively.

XML Validation for Data Mapper

When validating the source or destination XML files, Data Mapper now gives additional information along with the error "Source XML not valid" for invalid data. The reported error will show the name and ID of the relevant schema.

Migration/Upgrade Considerations

- On upgrading a project from xpi 4.13 to 4.13.1, the connection in Data Mapper step(s) may be lost in case the step was configured with MSSQL or Oracle database at Source or Destination side. The connection loss will be there if the step is created or updated ad a result of refresh schema function in the 4.13 version.
  This was introduced due to an accidental defect in xpi 4.13. The field names in MSSQL were handled without case sensitivity, causing the Mapper to fail in some cases where the database was set to case sensitive for column and table names.
  The fix now causes the field names to be identified with the case that it is defined in, thus breaking the mappings wherever these columns were used.

  To resolve the issue, all the broken connections have to be manually recreated.

Known Issue

- Amazon Corretto Java 8.282.08.1 version is not supported for GigaSpaces on the Windows platform.

- The SAP B1 resource does not get validated for the SAP B1 V10 when the Database Server Type is MSSQL 2016 or 2019.

- The **Restart** operation on the Agent's tab of the Local Agent Management Console does not work if the Local Agent service is running inside a dos command shell.
  The same works when the command prompt is started with the Administrator privileges.

- If the connectors' names contain Non-English/Unicode characters, they are displayed incorrectly in the <Local Agent Installtion>/**addons** folder when deployed through the Local Agent Management Console.
  The same works when the command prompt is started with the Administrator privileges.

- The timeout value defined in the TCPListener service will not be considered if the value for **RequesterTimeoutSec** property is defined in the mgreq.ini file.

- When Unicode characters are used in an OPC component, the component gives an error at runtime as "Error 210: Item [???] is not found".

- When a project is migrated or upgraded to Magic xpi 4.13 and then the SQL Statement is modified or the schema is refreshed, the Data Mapper connections are lost.
  To resolve the issue all the broken connections have to be manually recreated.

- When Magic xpi 4.13.1 is installed on top of xpi 4.13 with server-only installation mode, the projects having Dynamics AX or WCF components do not run and throw an error.

- In the Environment Settings utility, the OAuth2 process on the Email resource throws an "The remote server returned an error: (400) Bad Request." error.

- The arguments section of the Connector Builder incorrectly allows to add duplicate arguments with the same name ignoring the case.

Here is a list of your important issues that have been addressed in this release.

Fixed Issues

Issue ID	Description
MXPI-1185	After running the debugger for a project, the start.xml file could not get deleted even when the project was stopped and the Studio was closed.
MXPI-10018	The Move operation in the SharePoint connector for On-Demand resource type failed when handling the folders.
MXPI-10907	When using an XML schema in the Data Mapper, the child node's Replication property could not be set to Yes, if the same property for the parent node was already set to Yes.
MXPI-11890	The trigger for IBM i connector failed to handle the messages in the correct sequence (FIFO/FILO) from the data queue. In order to fix this issue, a new INI flag **IBM_I_ORDERED** that has been introduced, needs to be set in the Magic.ini file under the **MAGICXPI_GS** section with value as **Y**.
MXPI-12713	XML Position Forwarding was stuck when the XML file contained multiplicity elements in the child nodes with Append Data operation.
MXPI-13584	The Data Mapper did not allow to set the Replication property for the child compound nodes of an xml to set to Y when the same property of the parent node was already set as Y.
MXPI-13795	When a scheduler was performing a periodic SQL query operation for the Oracle database, the execution time increased than the expected interval, and a large number of "Thread Crash -139" errors were shown in the error log.
MXPI-14005	On the Web Services Client resource if the WSDL file contained custom-defined types, then it failed to load with an error in the Data Mapper as INVALIDE_S for that type.
MXPI-14262	For the Web Services Client resource, WSDL file with the import elements failed to load and the Studio got stuck during the validation process.
MXPI-14857	The WCF Client component threw an "Error 1251: WCFClient call error: Exception has been thrown by the target of an invocation" error when connecting to the SOAP service.
MXPI-14924	When running the project in debugger, if the value of any variable was changed in the Context View, the other Empty variable values were set to Null and resulted in erroneous behavior.

Issue ID	Description
MXPI-15016	The SAP ERP (old SAP R/3) connector threw an error when sending a specific IDoc to the SAP server.
MXPI-15044	When sending an email, the MailCharset property was not used by the Email component.
MXPI-15073	In the Japanese version, the value for the Date type variable could not be updated in the Context View of the project debugger.
MXPI-15471	The Web Services Client invocation failed for the second request with "soap fault: Error on verifying message against security policy Error code:1000" error.
MXPI-15504	The XML Append in Data Mapper added the element at the incorrect location due to that the XML failed to validate.
MXPI-15604	The FTP component failed to connect to the SFTP server in certain cases when the latest OpenSSH library was used on the server.
MXPI-15615	In a particular scenario, the contents of the Resources.xml file under the Magic xpi project's folder were removed and the file became 0 KB in size.
MXPI-15667	When the Web Services Client component returned fault for a particular WSDL file, the incorrect value was set in the SOAP envelope instead of the actual value configured in Data Mapper.
MXPI-15729	The Native gateway DB2400/As400 had lower performance as compared to ODBC gateway with IBM Client access driver when working under transaction mode in the Data Mapper for a large number of record insertion.
MXPI-15865	The Web Service invocation failed in a particular scenario with an error "Web Service Client invocation failed java.beans.IntrospectionException" for the Web Services Client resource.
MXPI-15902	The Picture argument in the DAM Methods tab could not be modified in the Connector Builder.
MXPI-15903	The Calendars resource did not allow the user to enter the date in the DD/MM/YYY format.
MXPI-15948	An extra space character was added, when the Flat File property type was set as Positional for the Flat File schema used in the Data Mapper destination.
MXPI-15950	When the priority for the messages in the BAM utility was set, the Activity Log in the Magic Monitor stoped working.
MXPI-15970	The QueryByFetchXML method for the Dynamics CRM component failed to fetch the query results and returned an error in the logs.

Issue ID	Description
MXPI-15971	The WCF Client step failed to execute with an error "Source or Destination has no mapping connections" when there were no arguments in the operation of a WCF service.
MXPI-16046	When the UPSERT operation in the Data Mapper was set to Yes, the project failed to build.
MXPI-16063	For some tables, the columns were not displayed in the Database wizard of the Data Mapper for the DB2/400 database.
MXPI-16506	Data loss was observed when the Directory Scanner moved files from source folder to destination folder and it resulted in files getting created with zero byte size.
MXPI-16549	The request XML was not validated against the same XML Schema file that was used to generate the Web Service.
MXPI-16556	The Data Mapper step crashed in some cases with an error, "ERR-THREAD-ABORTED (-139)" when multiple requests were sent to execute the Stored Procedure. The error can be fixed by increasing the **mgconnection** value in the magic.ini file. For more information, refer the Database Troubleshooting page in the Magic xpi Help file.
MXPI-16559	The Web Services Client service threw an error, "IllegalArgumentException: argument type mismatch" when invoking a particular Web service.
MXPI-16568	When the Data Mapper step was configured with PervasiveSQL, the Insert operation failed to execute.
MXPI-16577	In a particular scenario when invoking JD Edwards Web service using Web Services Client component, the invocation failed with an error, "java.lang.ArrayIndexOutOfBoundException".
MXPI-16578	The Update operation for the Sugar connector did not work when a specific project was migrated from Magic xpi 4.7 to xpi 4.13.
MXPI-16582	The comma character in the request URL of the REST Client component was replaced with '%2C'.
MXPI-16588	When a large number of messages were sent using the Advanced Send method of the WebSphere MQ component, it failed to deliver all the messages with an error, "Error 8002: Error while sending\\receiving".
MXPI-16591	The Web Services Client resource failed to display all the methods from a particular WSDL.
MXPI-16846	The start.xml was getting overwritten when the project was rebuilt. To prevent this, set the flag **OverwriteStartXMLFile** in the Magic.ini file with the value as No.

Issue ID	Description
MXPI-17147	The Data Mapper step took a very long time to load when it was configured with complex XSDs.
MXPI-17921	The response data was missing for the WCF Client component when the Windows NTLM authentication was used for a particular service.
MXPI-18105	The Quick Receive method for the Email component, generated irrelevant files even when no emails were received.
MXPI-18517	The WCF Client resource failed to load a particular WSDL.
MXPI-19152	In case of a specific XSD used in Data Mapper, the replication of the complex node was not retained after reopening the Mapper.
MXPI-19361	The FTP resource failed to validate if the AWS Transfer Family security policy on the SFTP server was set to "TransferSecurityPolicy-2020-06".

Note: All the maintenance versions are cumulative in nature and include all the fixes from all the previous maintenance versions.

In this release of Magic xpi 4.13, we are delighted to present you features such as new components, Magic SOAP Server and so on. Along with that the product offers greater enhancements on top of the existing features.

Magic xpi 4.13: New Features

DB Trigger Component

Magic xpi has introduced a new DB Trigger component. It lets the user to continuously monitor the database tables for Create, Update, or Delete events.
To work with this feature, the user has to:

- Create a new DB Trigger Service and provide the database details
- Select the tables for which the Create, Update, or Delete events have to be monitored
- Modify and run the template SQL script created by the service, to create triggers in the database
- Define the polling interval for these events on the trigger configuration
- Define the cleanup age for processed records on the DB Trigger service

OPC Connector

Magic xpi offers a new OPC connector that enables the secure data collection from PLCs and IoT devices as well as industrial, and measurement equipment.
The user can configure the OPC server and channels on the OPC resource. The Devices, their Addresses and Static Tags can be defined on the step.

Magic SOAP Server

Magic xpi has now introduced the new Magic SOAP server replacing the Systinet Server for Java and library dependencies. It is lightweight with a simplified Web interface. The migration efforts from the old Systinet Server are negligible. It supports Basic and Digest Authentication.

Calendars

Magic xpi now has provision to create Calendars which let the users add a list of dates. Users can create one or more Calendars entries.
This will be useful for the user in the following scenarios:

- When a Calendar is configured on the Scheduler service, it will prevent the scheduler from running on the dates defined by the selected Calendar.
- When a Calendar is configured on the Flow Enablement service, it will deactivate the flow from running on the dates defined by the selected Calendar.

For more information, refer to the *Calendars* page in the Magic xpi Help file.

Logs Collector Tool

Magic xpi has now introduced a new tool called **Logs Collector** that collects log files, dump files, configuration files, scripts, and other files useful for troubleshooting. This provides collection of diagnostic information in a single archive file. The users can provide this archive file to the support for the root cause analysis of the problem.

Feature Enhancements

Data Mapper - Ease of Use

- The new **Data Mapper filter** facilitates the users to navigate through complex schemas quickly, search a particular node by name or data type, and map it from the Source side to the Destination side. This feature also allows the users to filter the nodes by their data types. Search by Regular Expressions is also supported.

- The **Connect All** feature is now enhanced to support multiple connection logic as described below:

    - **Simple**: This connection logic is same as the previous versions with the addition of supporting case insensitive matching.
    - **Fuzzy**: This connection logic will follow the rules of the **Simple** matching with the addition of matching the Source node name to the Destination node name using the logic in the given order; begins with, ends with, and contains.
    - **1:1**: This connection method will not follow any special logic other than trying to connect each Source node to its adjacent node.

  The new Data Mapper design allows the users to multi-select nodes from the Source to the Destination to perform any of the above options.

- In the **Save and Load Connections** feature, the Save function enables the user to save the schema types and their connection lines as templates to be loaded into any Mapper step with similar schemas in the feature.

  Note: This feature should be seen as an extension of the Connect All feature and does not relate to the existing Export and Import features of the Mapper.

OData Pagination Support

The OData component now supports the pagination feature of the OData API. The maximum number of pages per request and the next page link required for pagination can be configured on the OData step configuration.
The Next page link value can be used instead of Endpoint URL, by selecting the **Use NextLink as Endpoint** check-box on the OData step configuration.

OData Annotations Support

The OData resource now supports the configuration of entity level, and row level annotations. Once configured, these annotations will be available on the Data Mapper schema for the OData step. The entity level annotations will be shown at the root level under the **annotations** element and the row level annotation will be under the **rowAnnotations** element for each row.

Side-by-side Installation Support

Two parallel installations of Magic xpi on the same system are now allowed.
If the system has a version older than xpi 4.13 installed, the user will be given a choice to either upgrade the existing installation or create a new one without removing the old installation.

Database Partitioning Support

Database partitioning is now supported for MSSQL and Oracle databases. It can be enabled by selecting the DB Partition check-box in the Database Support screen of the installation wizard.

Logging Improvement

The logging system is now changed from older log4j infrastructure to newer **SLF4J** and **Logback** for the Magic xpi components. Logging can also be flexibly configured using a separate file for each component. The support to the older log4j system is deprecated and is not recommended as it has lower performance.

GigaSpaces Upgrade

The GigaSpaces version in Magic xpi is upgraded to 15.2. This version also adds support for running the GigaSpages Management Console in Local mode.

Local Agent Silent Installation

Local Agent now supports the silent installation. The installer comes with the config.ini file with default configuration values. The user can change the default values as per requirement. The installer will read these values while starting the installation.

Auto Installation of Connectors in Local Agent

The user can install addon connectors as a part of the Local Agent setup. The required connectors should be present in the LAN\steupLA\addons folder of the installer. By default, the installer will not overwrite the existing connectors with the same name. To change this behavior, set the value of the **[Connectors]Overwrite** flag to **true** in the **config.ini** file.

Support for Multiple Management IDs

Magic xpi Local Agent now supports multiple Management IDs which are managed as part of the **management-ids.xml** file. The Management Console can now show the Agents, Agent Connectors, and Connectors associated with all the Management IDs or associated with a selected Management ID. This can be done from the **All Management** IDs drop-down menu on the Local Agent Management Console.

Additional Critical State Alerts

Two additional critical state email notifications related to the GigaSpaces are added to Magic Monitor. The password for sending the email is stored in an encrypted format.

Stall Processing on Critical Condition

The Magic xpi server can now be paused, if the server reaches a critical state. The server will wait based upon an exponentially increasing delay algorithm and will resume once the system is healed.

This behavior can be enabled by setting the flag **PauseOnCriticalConditions** in the [MAGICXPI_GS] section of the Magic.ini file. The default value for this variable is **N**.

FTP Server Command

FTP Component now allows the user to run server command on the FTP server.

Apache Tomcat Upgrade

Apache Tomcat® installation is upgraded to version 9.0.35 to address the security vulnerabilities.

API Support

The Salesforce and ServiceMax connectors are now upgraded to support the API version 48.0.

Attach to Project

Attach to Project support is added in Magic xpi. It can be used to connect the Studio debugger to a deployed instance of a project.

Behavior Changes

- The logging for Salesforce and ServiceMax components is now controlled using Logback.xml infrastructure and the Debugging Flag "DebugSFDCComponent" is no longer applicable for the component.
- The Data Mapper destination does not create an XML node when there is no value in the source XML and the XML schema property **Always create node** is set to **N**.

Known Issues

- If you install an older version of Magic xpi on top of an existing one, then it may lead to inconsistent behavior.
- The Web Services Client details are displayed as empty when the project is opened using the Environment Settings window. Once the project is opened in the Studio, the values get displayed correctly in the Environment Settings.
- The Sigar library is not compatible with Oracle JDK update 261 on Windows Server 2019 due to which the GSA service fails to start. To fix the issue go to the <Magic Installation>\Runtime\Gigaspaces\lib\optional**sigar** folder and rename it.
- The UPSERT operation in the Data Mapper has limitations while handling tables having a space character in their column names.
  For PostgreSQL database, the Data Mapper tree will show "Invalid SQL statement" error.
  For DB2, DB2400, MySQL, PervasiveSQL databases, the columns with space in the name are not displayed in the Columns page due to which the wizard process will be incomplete.
- The GSA service goes into the Paused state and fails to restart when upgrading Magic xpi 4.9 or 4.12.2 to xpi 4.13 with DB2/400 as an internal database.
- After upgrading to Magic xpi 4.13 from the versions which do not support DB partitioning, database partitions do not get created for the databases which support partitioning.
  This will not break the installation but you will not be able to take the advantage of the improved performance to the fullest. Please contact support for assistance.
- The Context View of the Debugger shows an error "The value does not support the date format" when displaying the value for date type of a variable or for date field from the UDS table for Japanese locale.
- When multiple Web Services triggers have the same operation names, an incorrect flow gets invoked.
- For Japanese locale, the step execution for the IBMi component gets stuck at runtime.
- The JD Edwards Enterprise One step cannot be configured for the resource having logical name.
- During the INSERT operation for the MySQL database, the records inserted in the tables with names containing Japanese characters get garbled. In this case, the Update operation also fails.
- After running the debugger for a project, the start.xml file fails to delete even when the project is stopped and the Studio is closed.
- For the OPC component, if Unicode characters are used in the Channel name, Device name and Item name, it fails with an error at runtime.
- Magic xpi installation does not work for Oracle 19c database.
- Automatic database creation during installation does not work for remote DB2.

Here is a list of some of your issues that have been addressed in this release.

Fixed Issues

QCR #	Description
MXPI-1311	When a specific file was processed more than once, duplicate records were inserted in the database.
MXPI-9954	After fixing the mapping errors related to Calculated Values, the build and rebuild operations failed for some of the migrated project.
MXPI-10199	In some cases, when the Database schema with a field type of blob was not mapped to the destination schema, a thread crash was observed at runtime along with the "A main thread was terminated abnormally. Recovery has been executed." error in the Magic Monitor.
MXPI-10494	The Data Mapper added an extra backslash to the Line feed(\\n) character in the resulting JSON.
MXPI-10549	Creating a large JSON file resulted in an empty file with zero size due to memory issue, but no Out Of Memory error entry was shown in the log file for the MSSQL database.
MXPI-10917	The Scheduler utility triggered the scheduler incorrectly when the frequency was set to the 31st day of a month.
MXPI-11073	When the Upsert operation was performed using dynamic or direct SQL query with Merge statement instead of generating the statement from the wizard, it failed to insert or update records.
MXPI-11204	Data Mapper couldn't identify certain types in the XML Schema (XSD) file.
MXPI-11271	The project failed to build on the Japanese locale when the SQL Statement was constructed with line indentation.
MXPI-11315	For the OPC connector, adding multiple lines in the Address tab failed.
MXPI-11568	The Update and UPSERT operation in the Data Mapper failed to update the value in the Alpha variable using the ASCIIChr function in the expression for MS-SQL database for Japanese locale.
MXPI-11731	The SAP ERP Trigger configuration threw an error, "No available extensions for [IDoc.xxx|http://IDoc.xxx]". when configuring the Extension.
MXPI-11875	In the Web Services Client, the XSD schema file was incorrectly created for a particular WSDL file.
MXPI-11878	Even after adding the Endpoint override definition in the Web Services Client, it was ignored and the client address from the WSDL file was invoked.

QCR #	Description
MXPI-12108	The Salesforce component failed to propagate errors back to the Magic xpi flow while running the project.
MXPI-12418	When a flow was enabled for DB transaction with MS-SQL database resource, it failed with an error "DB Transaction error:xxxxx : Login failed for user".
MXPI-12765	The WCF Client generated an incorrect schema file as compared to the SOAP UI.
MXPI-12878	In some cases, an error "The DAM dialog box encountered an exception and will be closed. See the log file for more information" was thrown when changing the encryption mode from the list.
MXPI-13082	In case of Magic xpi 4.12 Server only installation without the Studio feature, an error, "Could not initialize adapter and the Environment Setting.exe closes" was thrown when the Email connector resource was configured or re-configured using the Environment Setting.exe file as the 32-bit JDK was not installed during the xpi set-up.
MXPI-13546	For the SAP ERP component, after migrating a project, mappings were lost in steps in some cases.
MXPI-13702	The connection to the SAP ERP database terminated after the step was completed even when the Keep Connection Open checkbox was selected on the step.
MXPI-13714	The Web Services Client failed to load a particular WSDL file with an error, "Mgxpi.Log \{ERROR} - WithProgressBar method exception : The request was aborted: Could not create SSL/TLS secure channel"
MXPI-13837	For the Dynamics CRM component, even though the resource was validated it failed to retrieve the entities.
MXPI-13850	For the Japanese locale, the Message field property was missing in the Logging Scope for components.
MXPI-13928	For the FTP component, the FTP resource failed to validate when the server URL was too long.
MXPI-13982	The Web Services step from the new Web Services Client (which is the replacement of SSJ) threw NullPointer exception for some migrated projects.
MXPI-13988	For Data Mapper, when mapping a field in the XSD to a field in JSON and adding calculated value threw an error "An item with the same key has already been added" in the Expression Editor.
MXPI-14057	In some cases, the Magic xpi studio crashed while migrating projects from older versions.

QCR #	Description
MXPI-14152	The REST Client, when configured with OAuth, threw a "400 Bad Request" error as the required "State" property was not available. The REST Client resource has now been enhanced to support the new State property to prevent Cross Site Request Forgery.
MXPI-14374	The Host ID string changed continuously if any network adapter was used in Magic xpi.
MXPI-14852	For the Email component, enforcing the TLS 1.2 security protocol for incoming secure connection failed.
MXPI-15116	Data Mapper validation did not work for the JSON file at the destination when Schema had an element with '/' character in the name.
MXPI-15124	For WCF Client, the Load WSDL operation that required credentials threw a "401 unauthorized" error.

Note: Release Notes of the older versions are available in the PastReleaseNotes.pdf file located at <Magic xpi Installation>/Help folder.

About Magic Software Enterprises

Magic Software Enterprises (NASDAQ: MGIC) empowers customers and partners around the globe with smarter technology that provides a multi-channel user experience of enterprise logic and data.

We draw on 30 years of experience, millions of installations worldwide, and strategic alliances with global IT leaders, including IBM, Microsoft, Oracle, Salesforce.com, and SAP, to enable our customers to seamlessly adopt new technologies and maximize business opportunities.

For more information, visit www.magicsoftware.com.